

Title: Atrial Fibrillation: Prevention of Strokes

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Abstract: Atrial fibrillation is the most common arrhythmia seen in the clinical setting. This so called, irregularly irregular rhythm is associated with thrombosis, or clot formation, in the heart. These clots have the potential to break free and travel to different places in the body, including the brain. Clots traveling to the brain prevent adequate circulation, resulting in a stroke. This pamphlet describes atrial fibrillation, why it has the increased potential to form thromboses, which patients are at increased risks of strokes, and the treatment options including antithrombotic therapies.

This document was created by a medical student enrolled in the Primary Care Clerkship at the University of Minnesota Medical School as part of the course project. The aim of the project is to present information on a medical topic in the format of a patient education handout. It does not necessarily reflect the views of the University of Minnesota Medical School physicians and faculty. These materials are provided for informational purposes only and are in no way intended to take the place of the advice and recommendations of your personal health care provider. The information provided may no longer be up to date since it has not been reviewed since the date of creation. The information provided should not be used to diagnose a health problem or disease, or as a means of determining treatment. In the event of a medical emergency, immediately contact a doctor or call 911.

What is your risk?

Determining the Clinical Risk of Stroke

The risk of stroke varies widely among patients with atrial fibrillation, depending on whether or not you have certain risk factors. The following five factors are used to help determine the risk of stroke in people with AF.

- **Cardiac Failure**
 - Recent Congestive Heart Failure
- **Hypertension**
 - Blood pressures consistently measuring above 140/90
 - Currently taking medication for high blood pressure
- **Age**
 - 75 years old or older
- **Diabetes mellitus**
 - Fasting blood sugars above 126 or a non-fasting blood sugar level above 200.
 - Currently taking oral medication or insulin to control blood sugars
- **Stroke or Transient Ischemic Attack (TIA)**
 - Previous stroke or TIA

“Atrial Fibrillation is associated with a nearly 5-fold increase in the risk of stroke.”



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Atrial Fibrillation:

Stroke Prevention

**University of Minnesota
Primary Care Clerkship
Patient Education Tool**

Atrial Fibrillation

What is it?

Atrial fibrillation (AF) is the most common irregular heart rhythm in the clinical setting. It becomes more common in older people. In fact, 9% of people 80 years and older have AF.

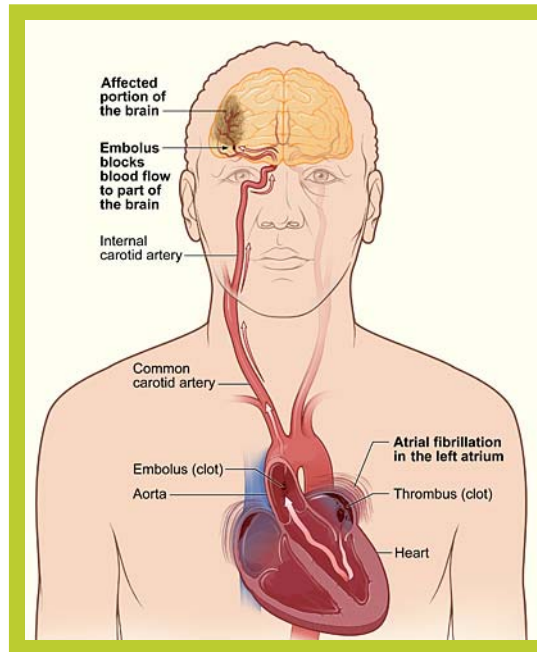
Some people have chronic AF, meaning that they have it all the time. On the other hand, some people have paroxysmal AF, meaning that they only have it some of the time and their episodes of AF may have certain triggers.

AF can be described as chaotic electrical activity in the top part of the heart, or the atria, which prevents it from contracting in a uniform manner. Additionally, random impulses in the atria travel to the ventricles, or the bottom part of the heart. The ventricles are in charge of pumping blood from your heart to the rest of your body.

Irregular impulses in the atrial may cause the heart to beat irregularly. This may lead to poor oxygen delivery to your brain. This results in the common symptoms seen in people with AF, as listed below.

Common Symptoms of Atrial fibrillation

- Heart palpitations, or an abnormal awareness of the beating of your heart
- Fatigue
- Dizziness
- Lightheadedness
- Some people may not have any of these symptoms



Why is it a problem?

The failure of the atria to beat in rhythm, as a result of AF, makes blood pool in the top part of the heart. This blood can form a clot, just like how you get a clot on your skin when you get a paper cut.

This clot can break free and be propelled from the heart to the brain. This clot can move into smaller and smaller blood vessels until it is lodged stopping blood flow to parts of your brain. This causes parts of your brain to become starved of oxygen, which is carried by the blood. This event is commonly called a stroke, and may result in many problems.

“Compared to placebo warfarin decreases the risk of stroke by 62%.”

Therapeutic Options

Preventing Clot Formation

Warfarin and aspirin both work to prevent clots from forming. These agents lessen the chances of strokes in people with AF.

Which therapy is right for you?

While warfarin remains the gold standard for preventing clots, it may not be the best fit for every person. The amount you take may not be the same from day to day, this will make visits to the clinic important and it may mean that you have to go more often. Warfarin may also cause bleeding, which means people who tend to fall a lot may run into problems. Typically, the benefits of clot prevention outweigh the risks of bleeding.

Aspirin, a cheap over the counter pill, used for many problems, can also help slow clots from forming in people with AF. Aspirin therapy is only suitable for people with one or no risk factors for stroke.